

ESA-100-2 Schreiber Foods - Logan Plant

Public Report

Introduction:

Headquartered in Green Bay, Wis., Schreiber is a privately held dairy company with sales in excess of \$3 billion. Its products – which include process, natural, cream and specialty cheese and yogurt – are sold primarily through customer brand distribution programs.

The overall site compressed air system at the Logan, UT plant was the focus of a 3-day Energy Savings Assessment (ESA).

Objective of ESA:

Identify compressed air system improvement recommendations, train plant personnel how to correctly model the current system and predict potential savings using the DOE AIRMaster+ software tool.

Focus of Assessment:

Compressed air supply, distribution and end uses.

Approach for ESA:

Amp data was collected on each air compressor for a period of seven days. Together, the DOE ESA Expert and plant personnel used LogTool V2 to interpret the data and format the data for direct import into AIRMaster+. Compressor profiles were developed and a baseline compressed air profile was created within AIRMaster+.

A survey of the compressed air supply and demand was completed. As part of the “training assessment” the plant personnel, with direction from the DOE ESA Expert, created a number of energy efficient measures to evaluate the impacts of each measure. Ultimately, these measures were prioritized in order to achieve the best effect of the improvements. A closeout meeting was conducted to present the findings to a number of plant personnel that may be affected by the proposed improvements.

General Observations of Potential Opportunities:

Medium-Term Opportunities

- ❑ Automate Air Compressors
During the pre-ESA data logging and subsequent modeling in AIRMaster+, several of the air compressors operated in some state of modulation or part-load. It is recommended that the air compressors in the “main system” be automated so that each air compressor is 100% loaded or off with one air compressor as “trim”, loading and unloading.
- ❑ Reduce Air Dryer Pressure Drop
In order for the automation and other recommended retrofits to be successful, it is recommended that all of the air dryer’s and filtration pressure drops be tested with air compressors at full load. Any air dryer/filtration setup that does not meet a pre-determined maximum allowable differential should be considered for replacement.
- ❑ Replace Open Blowing Application with Blower/s
While most production lines in this plant successfully use blowers or regulated air, there is one line that uses compressed air as part of its production process.. It is recommended that this open blowing application be replaced with a blower. Additional testing will need to be performed to determine the proper blower size/s and manifold arrangements.

Long-Term Opportunities

- ❑ Tie Additional Air Compressor to Main System

The air compressor that supports the off line support systems is partially loaded most of the time. This means that additional air is available to support other systems. It is recommended that a control valve and piping be installed so that any additional air is diverted to the main system.

- ❑ Feed Main System Air to all Parts of the Plant.

Certain parts of the plant are not fed from the main system, the main system should be tied to all plant loads. It is recommended that a control valve and piping be installed so that the main system feeds the entire plant.

The following section briefly discusses the projects identified for additional investigation or implementation. A qualifier is assigned to each project – *near-term*, *medium-term* or *long-term*. These descriptors are identified as follows:

- ❑ *Near-term* opportunities would include actions that could be taken as improvements in operating practices, maintenance of equipment or relatively low cost actions or equipment purchases.
- ❑ *Medium-term* opportunities would require purchase of additional equipment and/or changes in the system. It would be necessary to carryout further engineering and return on investment analysis.
- ❑ *Long-term* opportunities would require testing of new technology and confirmation of performance of these technologies under the plant operating conditions with economic justification to meet the corporate investment criteria.

Management Support and Comments:

Schreiber Foods is dedicated to reducing energy consumption throughout all of its plants. The maintenance team provided support prior to the ESA commencing as well as full support during the ESA. Schreiber is dedicated to improving the compressed air system efficiency at the Logan, Utah plant.